

WE CLAIM:

1. A topical delivery system, comprising:
a gemini surfactant in admixture with a biologically active agent, wherein the delivery system, when in contact with skin or a mucosal membrane, provides a localized or systemic therapeutic effect.
2. The delivery system according to claim 1, wherein the gemini surfactant is selected from an anionic gemini surfactant, a gemini cationic surfactant, a neutral gemini surfactant, an amphoteric gemini surfactant, or mixtures thereof.
3. The delivery system according to claim 1 or claim 2, wherein the gemini cationic surfactant has a hydrophobic tail comprising a C₃-C₃₀ alkyl group.
4. The delivery system according to any one of claims 1-3, wherein the biologically active agent is a plasmid DNA.
5. The delivery system according to claim 4, wherein the plasmid DNA comprises a gene encoding for interferon- γ .
6. The delivery system according to any one of claims 1-5, wherein the delivery system includes one or more pharmaceutically-acceptable vehicles.
7. The delivery system according to any one of claims 1-5, wherein the delivery system includes one or more supplements suitable for application for skin or mucosa.
8. The delivery system according to claim 6 or claim 7, wherein the delivery system is in the form of a cream, lotion, paste, ointment, foam, gel, lipid formulation, emulsion, solution, or suspension.
9. The delivery system according to claim 8, further comprising one or more supplements selected from a neutral carrier or a permeation enhancer.
10. The delivery system according to claim 9, wherein the neutral carrier is selected from 1,2-dioleoyl-sn-glycero-phosphatidylethanolamine (DOPE) or cholesterol.

11. The delivery system according to claim 8, further comprising a compound selected from diethylene glycol monoethyl ether, polyglyceryl 3-diisostearate, PEG-8 caprylic and capric glycerides, and octyldodecyl myristate.
12. The delivery system according to any one of claims 1-5, in the form of a liquid formulated as an aqueous solution, non-aqueous solution, aerosol, mist, spray, drops, or instillation.
13. Use of the topical delivery system according to any one of claims 1-12 for treatment of a skin disorder.
14. The use according to claim 13, for treatment of scleroderma, atopic dermatitis, or psoriasis.
15. The use according to claim 13, wherein the skin disorder is of genetic origin.
16. Use of the topical delivery system according to any one of claims 1-12 for treatment of a metabolic disease selected from the group consisting of gyrate atrophy, maternal hyperphenylalaninemia, familial hypercholesterolemia, and phenylketonuria.
17. Use of a gemini surfactant in the manufacture of a topical delivery system according to any one of claims 1-12.
18. The use according to claim 17 for manufacture of a medicament comprising as the biologically active agent a plasmid DNA comprising the gene encoding for interferon- γ , said medicament suitable for treatment of scleroderma, atopic dermatitis, or psoriasis.
19. Use of the topical delivery system according to any one of claims 1-12 for treatment of a systemic protein deficiency.